



Proposed Residential Development

Land North of Chiswell
Green Lane, Chiswell
Green, Hertfordshire,
AL2 3AJ

Transport Assessment prepared
on behalf of Headlands Way
Limited

May 2022

Land North of Chiswell Green Lane, Chiswell Green, Hertfordshire, AL2 3AJ

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1. Introduction

Scope of Transport Assessment Addendum

- 1.1 This Transport Assessment Addendum (TAA) has been prepared by Milestone Transport Planning (MTP) on behalf of Headlands Way Limited (*the applicant*) in support of an outline planning application (Reference: 5/2021/3194) with all matters reserved other than access for a development proposal comprising the erection of 330 residential units (Use Class C3) of mixed size and type together with associated cycle / refuse storage, car parking, and soft landscaping on land north of Chiswell Green Lane in Chiswell Green, Hertfordshire.
- 1.2 The above-mentioned planning application was submitted to the Local Planning Authority, St Albans City & District Council's (SACDC's) on 24th November 2022. This planning application was supported by a Transport Assessment (TA) and Residential Travel Plan (RTP), prepared by MTP. To inform the scope of the TA, pre-application discussions were conducted with Hertfordshire County Council's Highways Officer on 15th April 2021 and 02nd August 2021, respectively, which included a consideration of: -
- The site's accessibility credentials and potential for future households to adopt sustainable travel patterns and behaviour for a variety of journey purposes.
 - The baseline conditions of the local highway network with regards to operational and safety characteristics.
 - A description of the proposed access, parking, delivery / servicing, and emergency access arrangements.
 - An assessment of the multi-modal trip generation and associated impact on the local highway and transport networks over the course of a typical weekday including the AM and PM peak hour periods.
- 1.3 Following submission of the planning application, the Local Highway Authority, Hertfordshire County Council (HCC) provided a consultation response (dated February 2022) that outlined a recommendation for refusal based on the development proposal failing *"to comply with Hertfordshire County Council's Local Transport Plan policies relating to sustainable development (Policies 1. Transport User Hierarchy, 5. Development Management). Specifically, further explanation regarding bus services and access to bus services is required and further investigation into cycling infrastructure beyond Chiswell Green local shops."*
- 1.4 Additional information is sought by HCC Highways on the following aspects: -
- A plan to show how the St Stephen 082 Public Right of Way (PRoW) can be upgraded to form the main pedestrian and cycle access to the proposed development, in accordance with the principles set out in HCC's 'Non-Motorised Routes: A Design Guide' (August 2020).
 - A plan to show the design of a secondary / emergency access off the western side of The Croft, to enhance the site's permeability on-foot and by cycle.
 - An assessment of the vehicular trip generating potential of the former Garden of the Rose / Butterfly World visitor attractions located opposite the site, and associated impact on Chiswell Green Lane. The extant use is likely to generate a significant volume of vehicular traffic movements over the course of a typical weekend as opposed to a weekday.

- A plan / assessment on how off-street parking can be accommodated within the proposed Memorial Car Park, preventing the removal of mature trees off the southern side of Chiswell Green Lane. This would resolve concerns on displaced / overspill parking from existing households.
- An assessment of car driver, public transport, walk and cycle trips to / from the site through using 2011 Census origin and destination data from the Nomis website. The purpose of the exercise will be to establish the proportion of car trips, which can be replaced by walking, cycling and public transport. HCC's Highways believe there is significant potential to encourage future households to travel by cycle to various destinations in St Albans, particularly given the distance is below the recommended 5.0-kilometres.
- An audit together with an opportunity and constraints plan will be prepared to identify existing barriers and scope to enhance cycling routes between the site and St Albans. From reviewing St Albans City and District's (SACDC's) Cycling Map it is noted that there is existing on-carriageway cycle lane provision along either side of the B4630 Watford Road, near the road bridge over the A414. There may be potential to install a Toucan crossing facility to cater for cycle movements to / from St Albans.
- An investigation on how on-foot access to the nearest bus stops along either side of the B4630 Watford Road can be enhanced. Further, it will be necessary to liaise with HCC's Public Transport Officer and operators (i.e. Arriva, The Shires) to establish whether there is potential to divert or upgrade an existing bus service to reduce walk journey times and increase the likelihood of future households to travel by public transport for various journey purposes. When operational, it is understood that Butterfly World / Graden of the Rose visitor attractions were served by a bus. Following liaison with HCC's Highways there would be less support for a Demand Responsive Transport.
- A review of the two-strand approach for securing appropriate supporting infrastructure, as set out in HCC's '*Guide to Developer Infrastructure Contributions*' (2021) publication.

1.5 A copy of HCC's consultation response is attached at Appendix 1 of this report.

1.6 Consequently, this TAA presents additional information regarding the site's accessibility on-foot and by cycle to existing public transport services and local amenities, as well as other enhancements to the walking / cycling environment and mitigation measures aimed at encouraging future households and visitors to adopt long-term sustainable travel patterns and behaviour for various journey purposes.

Report Structure

1.7 The remainder of the TAA is structured as follows: -

- Section 2 provides a response to HCC's comments, which for clarity are reproduced in bold italics. Additional information / comments are provided where appropriate.
- Section 3 presents a summary of the main conclusions, clearly stating that the development proposals fully comply with Policies 1 and 5 of HCC's Local Transport Plan 4 2018 – 2031 (LTP4) adopted May 2018 with regards to the Transport User Hierarchy and Development Management.

2. Response to HCC's Consultation Response

- 2.1 This section of the report provides additional information and comments in response to HCC's initial concerns / request for additional information, which for clarity are reproduced in italics. Where appropriate, additional information / comment is provided.

Access

- 2.2 HCC Highways stated *"as part of the proposed access design, a short section of the carriageway of Chiswell Green Lane to the east of the site's access would be narrowed to 3.5-metres in width, to promote one-way operation (priority afforded to westbound traffic movements). As stated by the applicant, this feature would influence motorised users to travel at low speeds (i.e. sub-30-mph) in both an east and westbound direction. To be clear, the narrowing also conveniently overcomes the lack of available lane in the area. I assume the narrowing would not be included if it's primary function to create more space for the cycling facility was not necessary. However, I agree it is a useful addition in this situation because with greater attention to detail / design it can / should also make a feature of the right of way (St Stephen 082) which must also be upgraded to form a main pedestrian access to the development. However, further detail is required to ensure footpath 082 is upgraded to reflect the most direct route for cyclists and pedestrians accessing the development."*
- 2.3 In accordance with HCC's Highways request, and as shown on Drawing No. 21-086/003 (attached), it is proposed that the Public Right of Way (PRoW), St Stephen 082, which partially runs adjacent to the site's eastern boundary will be upgraded with a resin-bound surface for its entire length (i.e. 85.0-meters). Further, the existing hedgerow located mid-way along PRoW 082, adjacent to the boundary of No. 48 Chiswell Green Lane will be trimmed back to provide an effective width of 1.5-metres for the narrowest section. These enhancements will cater for pedestrians of all abilities travelling in a north and southbound direction to / from Chiswell Green Lane and The Croft.
- 2.4 As previously noted in the submitted TA, the site's proposed access, which incorporates the provision of a shared foot / cycleway is located off the northern side of Chiswell Green Lane, approximately 40.0-metres to the west of PRoW 082. This will connect to an internal road extending in a north-westerly direction to serve all of the residential units. As shown on the proposed masterplan layout plan, there are no residential units proposed within the vicinity of PRoW 082, near the site's eastern boundary.
- 2.5 With this in mind and given the relatively short walk / cycle distance and journey times, there is no benefit in diverting / upgrading the PRoW 082, to provide a direct cycle route to serve the proposed development. Furthermore, as shown on Drawing No. 21-086/003, the site's existing access, off the western side of The Croft will be retained to provide an emergency access as well as cater for pedestrian and cycle movements to / from the proposed development.
- 2.6 The emergency access together with an upgrade to a 100.0-metre section of PRoW 080 located in the site's north-eastern corner (see Drawing No. 21-086/004, attached) will in context of the masterplan layout cater for the likely west to east pedestrian movements to / from residential units situated in the centre, north-western, and north-eastern corners of the proposed development.
- 2.7 The above-mentioned upgrades to the PRoW network are located outside of the site's red line boundary and as such will constitute 'off-site' highway works.

- 2.8 Regarding access, HCC Highways consultation response stated, *"It is noted that there are several properties within the first section of Chiswell Green Lane, which are not currently fully operational, the additional traffic generated that may be generated by these land uses is not considered to lead to a severe impact on the route."*
- 2.9 Historically, there were a number of visitor attractions (i.e. Butterfly World and Gardens of The Rose), which were located off the southern side of Chiswell Green Lane, directly opposite the site. The Butterfly World and Gardens of The Rose visitor attractions permanently closed in December 2015 and May 2017, respectively. Vehicular access to an on-site car park serving both attractions was via the priority give-way junction of Miriam Lane / Noke Lane, the latter connecting to the A405 North Orbital Road via a 'left-in' and 'left-out' junction.
- 2.10 Consequently, under a scenario in which both attractions (Sui Generis) become operational, they would not generate a material number of vehicular movements along Chiswell Green Lane during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods.
- 2.11 In addition, *"the design of the proposed access would require the full utilisation of land classified as public highway (see Fig 2), and result in the displacement of parked vehicles, likely to be in association with property in Chiswell Green Lane. To compensate for the loss of off-street parking, the design includes the provision of 3 parallel parking bays within a section of the public highway located off the southern side of the carriageway. The planning authority are alerted the requirement to remove two mature trees to provide these spaces in this location. Judging by the condition of the verge in this location the area appears to be used by more than three vehicles. We are concerned that three spaces will be an under provision leading to displaced parking control will be necessary."*
- 2.12 To overcome potential concerns regarding the displacement of parked vehicles onto the local highway, it is proposed that residents would be permitted to park vehicles within the proposed memorial car park situated in the site's south-eastern corner. Following a site visit undertaken on 22nd March 2022, a total of 8 vehicles were observed to be parked within the highway verge, perpendicular to the carriageway of Chiswell Green Lane (see Figure 1).

Figure 1 View of Parked Vehicles along Chiswell Green Lane



- 2.13 As shown on Drawing No. 21-086/005 (attached), the memorial car park will comprise a total of 33 spaces measuring 2.4 x 4.8-metres in size. Of these, a total of 10 spaces will be allocated to current households / tenants of adjacent dwellings (No.'s 46 and 48 Chiswell Green Lane), which do not benefit from the provision of off-site parking spaces in the form of private driveways. The proposed number of parking spaces is clearly in excess of the number of vehicles, which are regularly observed to be parked within the highway verge.
- 2.14 The provision of a dedicated facility catering for the demand of visitors of the memorial park and existing households of properties will reduce the manifestation of displaced parking along Chiswell Green Lane and adjoining local highway network, in-turn alleviating any highway safety concern. It will further negate the requirement to remove mature trees from the highway verge.
- 2.15 In the context of new infrastructure to support increased walking, cycling, and public transport amongst future households, HCC's consultation response stated *"the concern is that the applicant has not taken the process further, at the pre-application stage we asked the question, what are the typical / routine destinations residents needs to reach and why? How can the proportion of car journeys used to make those journeys be replaced by walking, cycling and public transport? The applicant has made a connection to the neighbourhood centre, we would require consideration of other destinations slightly further afield and fully understand and where necessary overcome the barriers deterring active or public transport as a first choice."*

Current Demand

- 2.16 To address HCC's concern, additional analysis of Nomis Origin and Destination data from the 2011 Census, most notably train / underground, bus, and cycle journeys from the St Albans 020 Middle Layer Super Output Area (MSOA) to other local and regional workplace destinations has been undertaken.
- 2.17 As shown in Table 2.1, just under a quarter (23%) of households that live in the area encompassing the St Albans 020 MSOA travel by cycle to workplace destinations in Bricket Wood (e.g. Building Research Establishment) and Chiswell Green. An additional 29% travel to workplace destinations in St Albans, all of which are within a reasonable cycle distance of 5.0-kilometres of the site.

Table 2.1 Typical Destinations and Routes by Cycle

Middle Layer Output Area	Potential Destinations	No.	%	Potential Route
St Albans 020	Bricket Wood (Building Research Establishment), Chiswell Green	7	23	Chiswell Green Lane, Noke Lane, Lye Lane, West Riding, and Bucknalls Drive.
St Albans 014	St Columba's College, Westminster Lodge Leisure Centre, St Albans School, Prae Wood Primary School, Marlborough School and Waitrose.	3	10	Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, B463 Watford Road, King Harry Lane, and Verulamium Park.
St Albans 017	Abbey View Retail Park, Griffiths Retail Park, Sainsbury's Foodstore, St Adrians Catholic Primary School, Mandeville Primary School, and Watling View School.	3	10	Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, B463 Watford Road, St Stephen's Hill, and Griffiths Way.
Watford 010	Watford General Hospital, Vicarage Road Stadium, and Wiggenshall Industrial Estate.	2	7	Chiswell Green Lane, Noke Lane, A405 North Orbital Road, A412 St Albans Road, Langley Road, Denmark Street, Malden Road, A412 Rickmansworth Road, A4178 Cassio Road / Merton Road, The Hornets, Fearnley Street, A4145 Vicarage Road.
Barnet 030	Public Health England, Hendon Police College, and Metropolitan Police Driving Academy.	1	3	Cycling unlikely to be primary mode of travel as distance is circa 2.4-kilometres.
Luton 021	Capability Green Business Park, Cutenhoe Community Learning Park.	1	3	Cycling unlikely to be primary mode of travel as distance is circa 21-kilometres.
Dacorum 001	Markyate and Flamstead.	1	3	
Dacorum 013	Marylands Industrial Estate (Hemel Hempstead).	1	3	Circa 7.2-kilometres from site.
Dacorum 018	Chancerygate Business Centre, Apsley (Hemel Hempstead).	1	3	Circa 9.0-kilometres from site.
Hertsmere 004	South Mimms, Shenley.	1	3	Circa 12.0-kilometres from site.
Hertsmere 006	Borehamwood.	1	3	Circa 12.0-kilometres from site.
Hertsmere 010	Centennial Park, Aldenham County Park, and Elstree.	1	3	Circa 12.0-kilometres from site.

St Albans 007	Sandridge Gate Business Centre.	1	3	Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, B463 Watford Road, King Harry Lane, Verulamium Park, Abbey Mill Lane, Romeland, George Street, A5183 High Street, A1081 Chequer Street / St Peter's Street, B651 Stonecross / Sandridge Road.
St Albans 011	Campfield Road and Sphere Industrial Estate, Fleetville.	1	3	Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, B463 Watford Road, St Stephen's Hill, Griffiths Way, Nicky Line, Sutton Road, and Campfield Road.
St Albans 012	St Albans City	1	3	Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, B463 Watford Road, St Stephen's Hill, Griffiths Way, Nicky Lane, Charrington Place.
Stevenage 011	Horizon Technology Park, Roaring Meg Retail Park, GlaxoSmithKline Medicines Research Centre	1	3	Cycling unlikely to be primary mode of travel as distance is circa 27-kilometres.
Watford 001	Leavesden	1	3	Circa 9.0-kilometres from site.
Watford 003	Garston (Watford)	1	3	Chiswell Green Lane, Noke Lane, A405 North Orbital Road.
Welwyn Hatfield 011	Hatfield	1	3	Circa 12.4-kilometres from site.
TOTAL		30	100	

2.18 As identified in Table 2.2, overleaf, the majority (88%) of rail commuters living in the St Albans 020 MSOA regularly travel to destinations in Inner and Outer London. Of the remaining 12%, approximately 10% commute to other regional destinations in Hertfordshire including Borehamwood, Hemel Hempstead Luton, and Watford. Other national destinations include Birmingham and Winchester.

Table 2.2 Typical Destinations and Routes by Rail / Underground / Overground

Middle Layer Output Area	Potential Destinations	No.	%
City of London 001	City Thameslink, London Blackfriars.	73	21%
Westminster 018	Green Park, Piccadilly Circus, Leicester Square, Covent Garden, Temple, and Charing Cross.	24	7%
Westminster 020	St James's Park and Westminster.	19	6%
Westminster 013	Bond Street, Oxford Circus, Great Portland Street, and Tottenham Court Road.	14	4%
Islington 022	Angel, and Farringdon.	12	4%
Southwark 002	Borough.	12	4%
Tower Hamlets 033	Canary Wharf, Heron Quays, Poplar, and West India Quay.	12	4%
Camden 026	Goodge Street, Euston Square, and Warren Street.	10	3%
Camden 028	Holburn and Russell Square.	10	3%
Other London	Multiple Destinations.	113	33%
Other Hertfordshire	Hertsmere, St Albans, Three Rivers, and Watford.	34	10%
Other	Basildon, Birmingham, Milton Keynes, Luton, and Winchester.	8	2%
TOTAL		341	100

- 2.19 Table 2.3 reveals that just under half (49%) of households living within the St Albans 020 MSOA regularly travel by bus to workplace destinations located within St Albans city centre and Watford town centre. Approximately 8% travel by bus to Bricket Wood, How Wood, and Park Street. An additional 4% travel by bus to Hatfield Business Park.
- 2.20 These destinations are served by route no. 321 (Arriva, the Shires), which operates between Luton to Watford via Harpenden, St Albans, and Chiswell Green on a frequency of 1 service every 20-minutes, Monday to Saturday; and hourly on a Sunday.
- 2.21 Whilst 15% of households travel by bus to various destinations in London, this is likely to be a through a combination with rail.

Table 2.3 Typical Destinations and Routes by Bus

Middle Layer Output Area	Potential Destinations	No.	%
St Albans 012	St Albans City.	17	31%
St Albans 017	St Albans Abbey.	4	7%
Watford 009	Watford High Street and Watford Junction.	4	7%
Watford 001	Warner Bros. Studios, Leavesden.	2	4%
Welwyn Hatfield 010	Hatfield / Hatfield Business Park.	2	4%
St Albans 011	St Albans City.	2	4%
St Albans 019	How Wood and Park Street.	2	4%
St Albans 020	Bricket Wood.	2	4%
Stevenage 005	Stevenage.	2	4%
Other London	Barnet, Camden, Enfield, Hillingdon, and Westminster.	8	15%
Other	Hemel Hempstead (Boxmoor), Otters Pool Way Industrial Estate etc	9	17%
TOTAL		54	100%

2.22 Whilst the long-term impacts of the government's restrictions in response to the COVID-19 pandemic on travel patterns and behaviour (i.e. increased homeworking) are not yet fully understood, the analysis demonstrates that a significant proportion (23%) of households living in Chiswell Green regularly travel by cycle to various workplace destinations in St Albans.

Journey Purpose

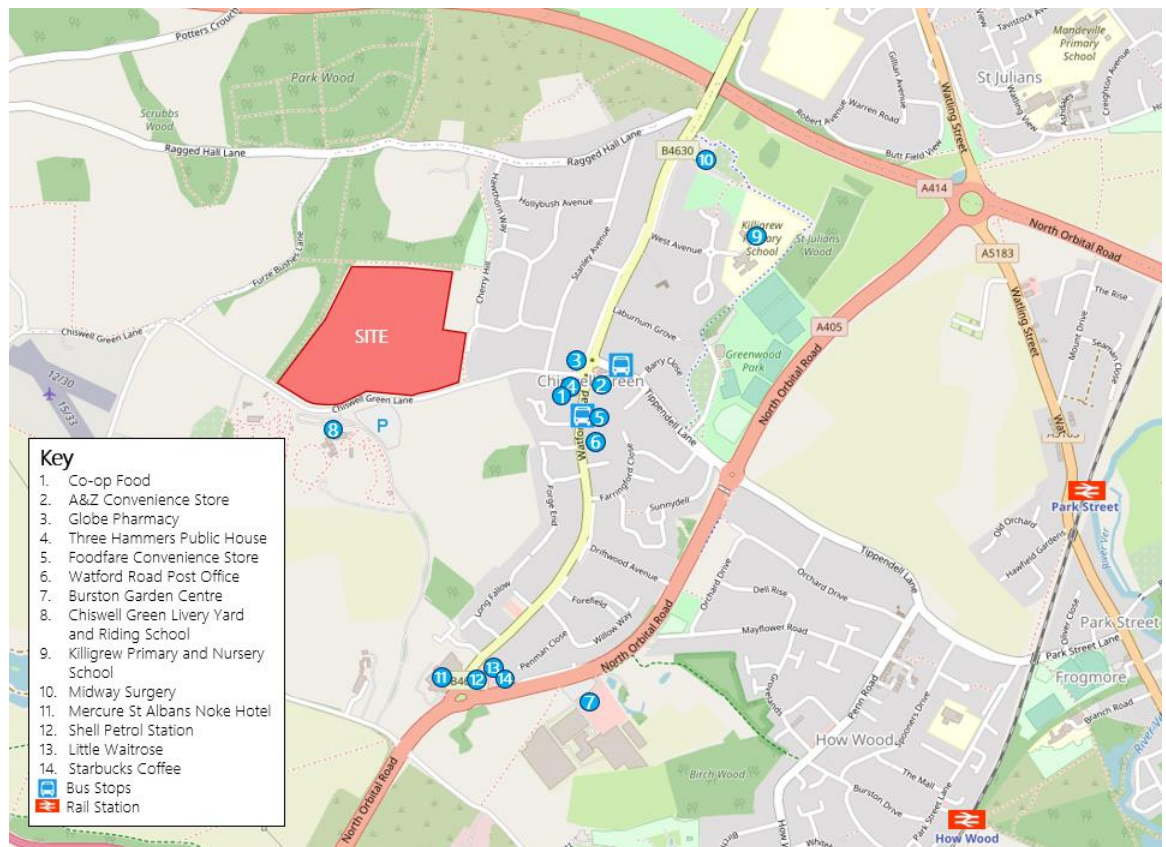
2.23 There are a number of reasons likely to influence future households to undertake various journeys, and these are outlined in Table 2.4. Each journey type will have different requirements with regards to destination, time constraints, mode and route choice.

Table 2.4 Proportion of Trips per Year by Journey Purpose

Journey Purpose	Proportion of Trips
Leisure	26%
Shopping	19%
Commuting / Business	18%
Education / Escort Education	13%
Personal Business	9%
Other Escort	9%
Other	6%

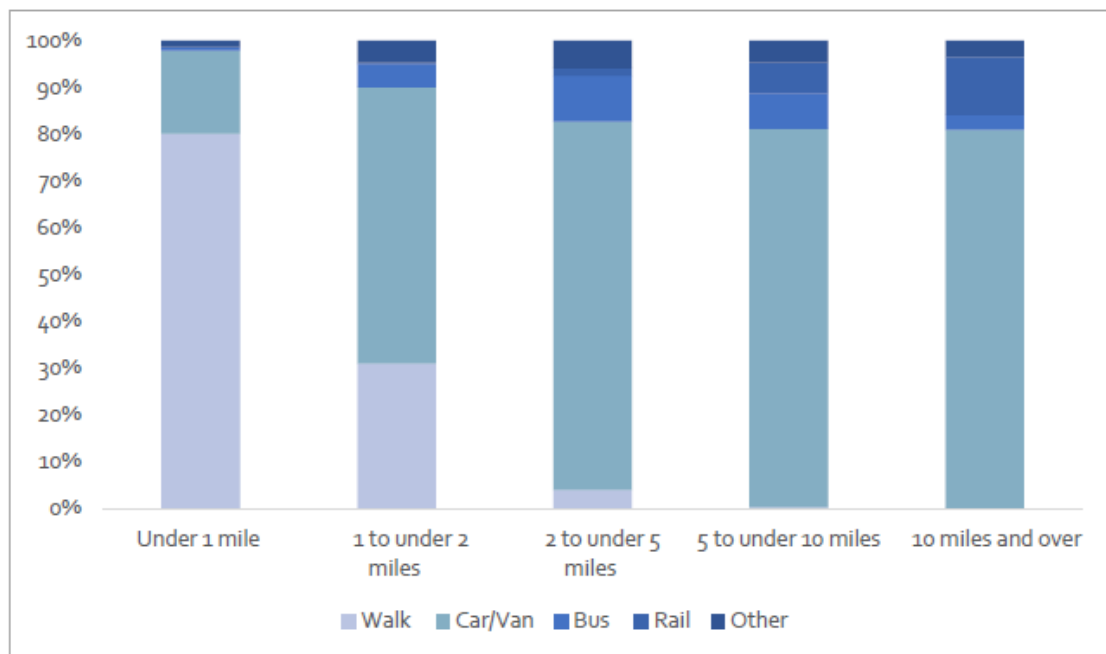
2.24 As identified in the TA submitted in support of the outline planning application and shown in Figure 2 below, there are a broad range of amenities located within maximum walk (2.0-kilometres) and cycle (5.0-kilometres) distances of the site, which are likely to cater for the everyday needs of future households.

Figure 2 Local Amenities Plan



2.25 When examining data from the National Travel Survey (NTS) 2019 (see Figure 3), it is evident that the majority of journeys under 1.0-mile (1.6-kilometres) are undertaken on-foot. For journeys between 1.0 and 2.0-miles (1.6 to 3.2-kilometres), walking accounts for circa 31%. For journeys between 2.0 and 4.0-miles (3.2 and 6.4-kilometres), walking accounts for 4%.

Figure 3 Mode Share of Trips by Main Mode for Different Trip Lengths: England



2.26 As outlined in Table 3.2 of the submitted TA, a range of amenities, which are likely to cater for the convenience, education, employment, healthcare, leisure, and retail needs of future households are within the maximum walking and cycling distances of the site.

Site Audit

2.27 In line with Policy 1 of HCC’s LTP4 and the requirement to prioritise vulnerable road user needs (pedestrians and cyclists) over motorised users, and the potential for cycle to replace short journeys to key employment destinations such as St Albans, MTP conducted a site audit of cycle routes on 22nd March 2022, to gain an understanding of perceived barriers and opportunities.

2.28 As shown in Figure 4, the site benefits from being accessible by cycle to St Albans city centre via a network of on / off-carriageway sections of cycleway.

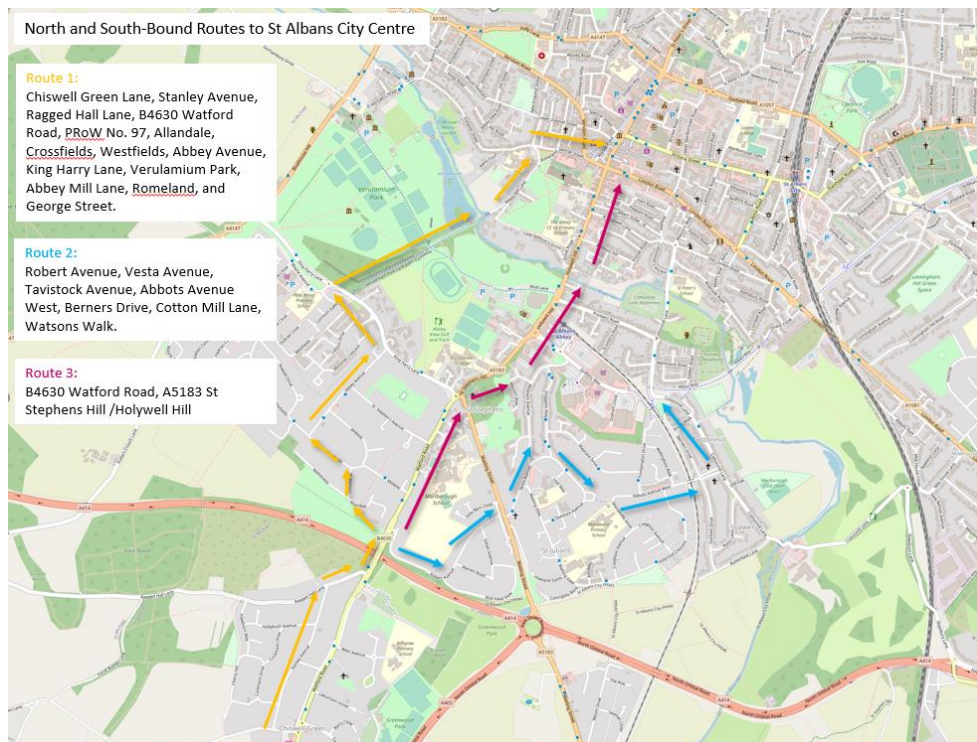
2.29 It is noteworthy that the surrounding local highway network, which comprises Chiswell Green Lane, Stanley Avenue, Ragged Hall Lane, Allandale, Crossfields, Westfields, Abbey Avenue, Robert Avenue, Vesta Avenue, Tavistock Avenue, Abbots Avenue West, and Berners Drive are all designated as “roads suggested by local cycles” (usually quieter roads with some busy sections).

2.30 In addition, Robert Avenue, Vesta Avenue, Tavistock Avenue, Abbots Avenue West, and Berners Drive form part of National Cycle Network Route 6 (NCNR6), which adjoins to NCNR61, the latter forming part of The Alban Way.

Figure 4 Extract of St Albans City and District Cycle Route Plan (Source: SACDC)



Figure 5 North and South-Bound Cycle Routes Plan



2.31 As shown in Figure 5, there are 3 cycle routes available to future households to gain access to a broad range of amenities available in Chiswell Green and further afield in St Albans, and these are described in-turn below.

- [Route 1](#): Chiswell Green Lane, Stanley Avenue, and Ragged Hall Lane, the B4630 Watford Road, PRoW No. 97, Allandale, Crossfields, Westfields, Abbey Avenue, King Harry Lane, Verulamium Park, Abbey Mill Lane, Romeland, and George Street.
- [Route 2](#): The Croft, Cuckmans Drive, Hollybush Avenue, Stanley Avenue, Ragged Hall Lane, the B4630 Watford Road, Robert Avenue, Vesta Avenue, Tavistock Avenue, Abbots Avenue West, Berners Drive, Griffiths Way / The Alban Way.
- [Route 3](#): Chiswell Green Lane, Stanley Avenue, and Ragged Hall Lane, the B4630 Watford Road, A5183 St Stephen's Hill / Holywell.

Route 1

2.32 For the majority of its length, Route 1 utilises a network of residential roads, which are lightly trafficked in nature and subject to low vehicle speeds, providing suitable conditions for cycling.

2.33 At the give-way priority junction of the B4630 Watford Road / Ragged Hall Lane, the cycle route adjoins an on-carriageway cycle lane that heads in a northerly direction. This forms part of NCNR6, which on a local level connects St Albans city centre to How Wood via the predominately residential areas of St Stephens and St Julians, on the south-eastern edge of the settlement.

2.34 As shown in Figure 6, there are several uncontrolled crossing points are present, which provide safe and convenient access to the southbound cycle lane and section of NCNR6 that heads towards How Wood and Watford. The on-carriageway cycle lanes and markings are indistinct in several places.

Figure 6 View of Cycling Infrastructure along the B4630 Watford Road



2.35 The northbound cycle lane intersects with a private access serving Wadley Hut (Scouts Hut), located off the western side of the B4630 Watford Road. Despite the presence of signage indicating a local cycle route, the private access forms part of PRoW (St Albans City 097), which beyond the Scouts Hut heads in a westerly direction, prior to emerging onto the residential culs-de-sac of Allandale / Netherway. As shown in Figure 7, the surface of PRoW (St Albans City 097) comprises of loose gravel.

Figure 7 View of PRow (St Albans City 097)



2.36 Beyond Netherway, the cycle route heads in a northerly direction via the residential roads of Crossfields, Westfields, and Abbey Avenue. At the give-way priority junction of Abbey Avenue / King Harry Lane, the route adjoins to a well-surfaced shared foot / cycleway that runs along the southern side of King Harry Lane.

2.37 The shared foot / cycleway heads in a north-westerly direction and connects with a recently installed Toucan crossing facility, which provides access to a traffic-free route that runs through the centre of Verulamium Park. On entering Verulamium Park from the northern side of King Harry Lane, cyclists are requested to dismount from cycles due to the steep gradient and narrow footbridge (see Figure 8).

Figure 8 View of Shared Foot / Cycleway Infrastructure along King Harry Lane / Verulamium Park



- 2.38 As shown in Figure 9, the shared foot / cycleway comprises of a wide metalled surface that bisects Verulamium Park in a south-west to north-east direction, and connects King Harry Lane to Abbey Mill Lane, George Street, and High Street in the centre of St Albans.

Figure 9 View of Traffic-Free Section of Cycle Route Through Verulamium Park



Route 2

- 2.39 Route 2 facilitates direct access to St Albans Abbey rail station via the 'quiet' residential roads of Robert Avenue, Vesta Avenue, Tavistock Avenue, Wilshere Avenue, Abbots Avenue West, Berners Drive, and Griffiths Way, which skirt the south-eastern periphery of St Albans.
- 2.40 The route replicates NCNR6, and as shown in Figure 10 benefits from adequate signage, road markings, and a dedicated uncontrolled crossing facility on the A5183 Watling Street.

Figure 10 View of Existing Infrastructure Along A5183 Watling Street and Tavistock Avenue



- 2.41 As shown in Figure 11, the western section of Abbots Avenue West is comprised of 'potholes', creating an uneven surface for cyclists.

Figure 11 View of Abbots Avenue West



- 2.42 A traffic-free section commences off the northern end of Berners Drive, and facilitates direct access to the Abbey View Retail Park, off the southern side of Griffiths Way via a level crossing (see Figure 12). An additional traffic-free section known as 'The Alban Way' heads in a north-easterly direction along the former Hatfield to St Albans railway line and facilitates access to the employment areas of the Campfield / Sphere Industrial Estate and Brick Knoll Park, located to the east of St Albans city centre.

Figure 12 View of Traffic-Free Route Section of NCNR6



Route 3

- 2.43 Route 3 comprises the B4630 Watford Road, and the A5183 St Stephen's Hill / Holywell Hill, and provides a direct and alternative cycle route to St Albans city centre.
- 2.44 Whilst a relatively short section of the B4630 Watford Road located either side of the A414 contains on-carriageway cycle lanes, this part of the highway network was observed to experience a significant volume of slow-moving traffic, and as such is unlikely to provide an attractive route for less experienced / novice cyclists.
- 2.45 A plan examining the constraints and opportunities of cycle routes 1 to 3 is attached at Appendix 2 of this report.

Secondary Access

- 2.46 Regarding the site's proposed secondary access, HCC's Highways stated *"it is not made clear why this access includes this restriction and it is difficult to understand how in practice this will work. The LHA would encourage all developments of this nature to maximise permeability to help fully integrate development to the adjacent network. It is assumed the route will be constructed using tarmacadam or similar. However, the appearance/junction/boundary treatment are not made clear."*
- 2.47 In accordance with HCC's Highways comments and enable the development to be fully integrated and permeable to the existing settlement of Chiswell Green, the site's secondary access, located off the western side of The Croft will not restrict pedestrian and cycling movements.
- 2.48 As shown on Drawing No. 21-086/003, the secondary access will extend from the eastern-most spur of the internal access road and measure circa 55.0-metres in length and 4.8-metres in width. Retractable bollards will be installed at either end to ensure access is restricted to emergency service vehicles, pedestrians and cyclists-only. It is proposed that the secondary access will be constructed using tarmacadam. The resin bound surface will extend to encompass the northern side of the secondary access, to cater for north and south pedestrian movements.
- 2.49 To enable existing dwellings located off The Croft to be serviced by large refuse trucks, the retractable bollards will be set-back by circa 14.0-metres.

Highway Capacity Impact

- 2.50 Under the section of the consultation response titled 'Highway Capacity Impact' HCC's Highways stated that *"the applicant claims the development is within walking distance of bus stops located either side of the B4630 Watford Road and Tippendell Lane which are served by frequent bus services to a host of local and regional destinations. However, in support of the overarching need to increase bus patronage to reduce car use, access to bus routes is a key consideration. HCC's highway design guide states that'bus stops should be located so that the maximum walking distance from any dwelling is 400m'. Although at this stage the internal layout is only indicative clearly the distance between bus stops in Watford Road is greater than 400m. The applicant reiterates predicted patronage to be in the region of 37 and 30 two-way movements by public transport during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, it is considered that this demand can be easily accommodated on existing bus routes (based on the existing resident's modal split). We would not disagree with this assessment, but we should not lose sight on the fact that we are seeking to improve the existing situation by increasing the proportion of residents using bus services. The applicant's Travel Plan predicts the new residents will increase their bus use by 4% over the first five years. By retaining the current level of bus service and expecting a new community (which are potentially a greater distance from the services compared with existing residents) suggests we are going to fail to achieve this objective. Further investigation into how access to bus services, and bus services will be improved in support of this proposal."*

- 2.51 As noted in the TA submitted in support of the planning application, whilst the maximum walk distances to the nearest bus exceed those recommended within the Chartered Institution of Highways and Transportation's (CIHT's) *'Buses in Urban Environments'* (January 2018) publication, future households are likely to be influenced by other factors such as the topography, quality, and safety of a walking route.
- 2.52 Table 2.5 presents the principal walking routes, distances and journey times from the centre of the site to the nearest bus stops located along either side of the B4630 Watford Road and Tippendell Lane. The principal walking routes from the centre of the site would be via Chiswell Green Lane, and the network of residential roads to the east of the site (i.e. The Croft, Cuckmans Drive, Stanley Avenue, and Stanmount Drive).

Table 2.5 Walk Journey Times to Nearest Bus Stops

Nearest Bus Stops	Walk Route	Walk Distance*	Walk Journey Time
Three Hammers PH (Southbound towards Watford), B4630 Watford Road.	Chiswell Green Lane, and B4630 Watford Road.	780-metres	9-10-minutes
Three Hammers PH (Northbound towards St Albans, Harpenden, and Luton), B4630 Watford Road.	Chiswell Green Lane, B4630 Watford Road, and Tippendell Lane.	830-metres	10-minutes
Three Hammers PH (Eastbound towards Bricket Wood).	The Croft, Cuckmans Drive, Stanley Avenue, Stanmount Drive, and B4630 Watford Road.	838-metres	10-minutes
West Avenue (Southbound towards Watford), B4630 Watford Road.	The Croft, Cuckmans Drive, Stanley Avenue, Stanmount Drive, and B4630 Watford Road.	965-metres	10-minutes
Three Hammers PH (Northbound towards St Albans, Harpenden, and Luton), B4630 Watford Road.	The Croft, Cuckmans Drive, Stanley Avenue, Stanmount Drive, and B4630 Watford Road.	965-metres	10-minutes
*Measured from centre-point of the site.			

- 2.53 As demonstrated in Table 2.5, all of the nearest bus stops are within a 10-minute walk distance of the site. The walking routes would occur via the existing network of residential roads, which all benefit from having level access, and the provision of good quality and lit footways. The walking routes will be overlooked by existing dwellings, which provide a good level of surveillance for future households.
- 2.54 To encourage future households to travel by bus for various journey purposes, a financial contribution towards upgrading / enhancing the frequency of bus route 321 has been sought from HCC's Passenger Transport Team. The cost of achieving this long-term aspiration, based on the assumption that revenue is given to HCC) is in the order of £195,000 per year for 5-years.

Mitigation Summary

- 2.55 HCC's consultation response states *"the applicant claims to have 'set a package of measures in the form of a Movement & Access Strategy that is a series of tailored transport solutions to ensure that places of residence, work and leisure within the site are fully accessible but also ensures efficient, reliable, and legible travel connections to existing settlements and transport hubs, encouraging sustainable travel choices and removing physical and psychological barriers to movement.' Unfortunately, we have not arrived at the same conclusion."*
- 2.56 It further states that *"the applicant has considered a link to local facilities, but it will be necessary to investigate routes beyond junction with Watford Road. National planning policy states that we should that '...appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and it's location' (NPPF, 110 a)). Accepting the clear links with St Albans City we would expect an investigation into the links between city and the site, what barriers exist, in particularly to cycling, and how can they be overcome?"*
- 2.57 Since a significant proportion of households living in the area surrounding the site are dependent on travelling by cycle to employment areas in both Bricket Wood and St Albans, consideration will be given to identifying potential barriers and opportunities on key cycle routes.
- 2.58 With reference to SACDC's Cycling Map, cycle access from the site to Bricket Wood, most notably the Building Research Establishment would be via a network of *'quieter roads'* including Chiswell Green Lane, Orchard Drive, Penn Road, How Wood, Park Street Lane, some of which form part of NCNR6. It is noteworthy that part of this route will be enhanced through the provision of a shared foot / cycleway infrastructure along Chiswell Green Lane, and at the 3-arm mini-roundabout junction of the B4630 Watford Road / Chiswell Green Lane.
- 2.59 To enhance cycle connectivity from the site to local amenities available and accessible by cycle in Chiswell Green (including Killigrew Infant and Primary School) and potential employment destinations in St Albans city centre, this section proposes a number of enhancements to the local cycling environment.
- Designate Watford Road Minor (service road that runs parallel with the B4630 Watford Road) as a cycle route. Provide new signage along the B4630 Watford Road to direct cyclists along the PRow No. 97 or Robert Avenue (NCNR6). Cycle lane separators (i.e. one piece wandorca) could also be provided along the on-carriageway cycle lanes.
 - Upgrade existing Puffin crossing located circa 80-metres north of the give-way priority junction with Stanmount Road to a Toucan crossing facility, thereby providing a safe and convenient access to Killigrew Infant and Primary School situated at the eastern end of West Avenue.
 - A new section of shared foot / cycleway will be provided along the eastern side of the B4630 Watford Road, which connects the southern side of West Avenue to the upgraded Toucan crossing.
 - Refresh the north and southbound on-carriageway cycle routes located on either side of the B4630 Watford Road.
- 2.60 The above-mentioned changes are shown on Drawing No. 21-086/006 (attached).

- 2.61 In addition to the provision of 'hard' infrastructure, the applicant is willing to provide the first occupier of each unit with an e-bike, as part of the Residential Travel Plan (RTP) initiative, to encourage a modal shift away from private car for various journey purposes.
- 2.62 Academic research published within Transportation Research Part D: Transport and Environment Volume 90 (January 2021) on the potential for modal shift revealed: -
- E-bikes are extremely popular and are available to meet the full age range and physical ability.
 - E-bikes provide the greatest return for modal shift.
 - E-bikes provide the greatest CO2 reduction when accessible for rural / semi-rural communities.
 - E-bikes are charged using a standard electric socket. Typically, E-bikes have a typical 30-mile range / 15-mph (some to 28-mph).
 - E-bikes promote a voluntary modal shift from private cars.
- 2.63 Future households would be aware of this initiative, through the Travel Welcome Pack as well as at the point of purchasing a new property.

Planning Obligations

- 2.64 HCC's consultation response states *"as you are aware HCC have recently published our 'Guide to Developer Infrastructure Contributions', the Transport section includes the consideration of our two-strand approach to securing appropriate supporting infrastructure. At this stage this policy has not been considered by the applicant and is integral to the discussion relating to sustainability."*
- 2.65 The Guide to Developer Infrastructure Contributions was published in draft format by HCC in June 2021. It provides an overview of obligations, which may be sought as part of the planning process followed by a focus on those obligations which might be sought by the county council to mitigate the impact of development. It replaces the previous HCC policy document *"Planning Obligations Guidance – Toolkit for Hertfordshire (Hertfordshire County Council's requirements)"*.
- 2.66 Section 2 'Transport' states *"Planning obligations can be used to ensure developments maximise accessibility by sustainable modes. They can also be used to ensure developments have safe access / egress and minimise development-related impacts such as traffic congestion."*
- 2.67 It further states *"in line with the Local Transport Plan (LTP4) the county council will actively seek planning obligations which will improve sustainable transport facilities and services for passenger transport users who are using the development and generally for those users in the surrounding area. This will also include improvements to Public Rights of Way."*
- 2.68 The 'hard' off-site highway infrastructure and 'soft' information-led measures together with indicative costings, which are required to mitigate the impact of the development proposals on the local highway and transport networks are for completeness set out in Tables 2.6 and 2.7.
- 2.69 The off-site highway infrastructure improvements are separated into the following sub-categories: -
- Strand 1: Initial works deemed necessary to encourage future households to adopt long-term sustainable travel patterns / behaviour on a localised level; and

- Strand 2: Additional works required to encourage future households to adopt long-term sustainable travel patterns / behaviour on a wider sub-regional level.

2.70 As shown in Table 2.6, the total cost of the off-site highway infrastructure improvements is estimated to be in the order of £970,000. This includes “pre-planning” assumptions regarding preliminaries (20%) and contingencies (50%).

Table 2.6 Off-Site Highway Infrastructure Works and Associated Costs

Strand	Description of Works	Indicative Costs
	Provision of 3.0-metre-wide shared foot / cycleway along northern side of Chiswell Green Lane extending from site’s proposed access to the eastern side of the B4630 Watford Road together with raised table and pedestrian / cycle crossing facilities at the give-way priority junction with Stanley Avenue, and double mini-roundabout junctions with Tippendell Lane, as shown on Drawing No.’s 21086/002, 21086/0021/ and 21086/2, attached.	£555,000
1	Provision of a 2.0-metre-wide resin-bound gravel footway along the full-length of St Stephens PRoW 082 (30.0-metres), which connects the northern side of Chiswell Green Lane to The Croft; removal of hedgerow to provide an effective width of 1.5-metres; and provision of an emergency access comprising a tarmac surface and retractable bollards, as shown on Drawing No. 21086/003, attached.	£155,000
	Provision of a 2.0-metre-wide resin-bound gravel footway along a 100.0-metre section of St Stephens PRoW 080, which connects the site’s north-eastern access to Cherry Hill, as shown on Drawing No. 21086/004, attached.	£70,000
2	Provision of appropriate signage and cycle markings along service roads running parallel with the north and south-bound carriageways of the B4630 Watford Road, to connect with both existing and proposed infrastructure; replacement of a Pelican crossing with a Toucan crossing facility together with dropped kerbs to the south of the give-way priority with West Avenue, as shown on Drawing No. 21086/006, attached.	£190,000
TOTAL		£970,000

2.71 In addition to the provision of ‘hard’ infrastructure, a number of ‘soft’ information-led measures will be implemented as part of the on-going co-ordination of the RTP. As set out in Table 2.7, the total cost of implementing the RTP, which includes the financial contribution towards enhancing local bus services along the B4630 Watford Road corridor is calculated to be in the order of £334,210.

Table 2.7 Residential Travel Plan Measures and Associated Costs

No.	Description of Travel Plan Measure	Indicative Costs
1.	Prepare, print, and distribute Home Travel Packs to each new household. (330 x £80 per pack).	£26,400
2.*	Provision of an E-bike to each new household. (330 x £800 per cycle).	£264,000
3.	Provision of free monthly bus tickets / vouchers. (330 x £57 per 4-week adult ticket in Watford)	£18,810
4.	Residential Travel Plan Co-ordination (5-Years).	£25,000
5.	Enhancement of local bus route 321 (5-Years).	£975,000
TOTAL		£1,309,210

*Limited to first occupier-only.

2.72 When combining the 'hard' infrastructure and 'soft' information-led measures, the total cost is calculated to be £2,279,210. The provision of 'hard' infrastructure in combination with the 'soft' measures (i.e. E-bikes), which will be promoted through the RTP will encourage future households to adopt a sustainable travel patterns and behaviour, leading to a significant modal shift from private car for various journey purposes.

3. Summary & Conclusions

3.1 This TAA has been prepared by MTP on behalf of the applicant in support of an outline planning application (Reference: 5/2021/3194) with all matters reserved other than access for a development proposal comprising the erection of 330 residential units (Use Class C3) of mixed size and type together with associated cycle / refuse storage, car parking, and soft landscaping on land north of Chiswell Green Lane in Chiswell Green, Hertfordshire.

3.2 In summary the report demonstrates: -

- The site's emergency access located off the western side of The Croft will comprise of a tarmac surface with retractable bollards installed at either end. This access will enhance the permeability of the proposed development to non-car modes and maximise the opportunity for future households and visitors to adopt long-term sustainable travel behaviour and patterns for various journey purposes.
- As part of a package of off-site highway works, it is proposed that the existing PRoW network (i.e. St Stephens FP080 and FP082) located outside of the site's red line boundary, will be upgraded with a resin bound gravel surface to facilitate access on-foot throughout the year.
- To compensate for the loss of informal parking within the highway verge, it is proposed that a proportion of spaces will be allocated to existing residents. This will overcome initial concerns from HCC's Highways regarding the potential for displaced / overspill parking. Further, it will reduce the need to implement parallel parking spaces along the southern side of the carriageway of Chiswell Green Lane.
- The previous visitor attractions located of the southern side of Chiswell Green Lane were served by a vehicular access located at the end of Miriam Lane. Consequently, when operational they would not have generated any vehicular movements along Chiswell Green Lane over the course of a typical weekday.
- Analysis of origin and destination data from the 2011 Census revealed that under a quarter (23%) of households that live in the area encompassing the site travel by cycle to workplace destinations in Bicket Wood (e.g. Building Research Establishment) and Chiswell Green. A further 29% travel to workplace destinations in St Albans, all of which are within a reasonable cycle distance of 5.0-kilometre of the site.
- To provide an attractive environment for cyclists gaining access to key local and regional destinations beyond the district centre of Chiswell Green Lane, the TAA provides a package of 'hard' infrastructure and 'soft' information measures to promote a modal shift away from private car to cycle for various journey purposes.
- In accordance with HCC's 'Guide to Developer Infrastructure Contributions', the TAA provides additional information on the cost of implementing off-site highway infrastructure enhancements, and a raft of measures within the RTP aimed at encouraging long-term sustainable travel patterns and behaviour amongst future households and visitors.

3.3 In the context of the guidelines within paragraph 111 of the NPPF (July 2021) it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding transport network and therefore planning permission should not be withheld on transport planning and highway grounds.

Appendix 1

Mark Youngman
Development Management Group Manager
Hertfordshire County Council
Postal Point CHO242
County Hall
Pegs Lane
Hertford
SG13 8DE

Response to Planning application from Hertfordshire County Council (T and CP GDP Order 2015)

Director of Planning	District ref.	5/2021/3194
St Albans and City District Council	HCC ref.	
Civic Centre	HCC received:	
St Peter's Street	Area manager:	James Dale
Hertfordshire	Case officer:	James Dale
AL1 3JE		

Location

St Stephens Green Farm Chiswell Green Lane St Albans Hertfordshire

Application Type

Outline Application

Application Details

Outline application (access sought) for demolition of existing buildings, and the building of up to 330 discounted affordable homes for Key Workers, including military personnel, the creation of open space and the construction of new accesses

Decision

Notice is given under article 18 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 that the Hertfordshire County Council as Highway Authority recommend this planning application is **refused** for the following reason:

The proposal fails to comply with Hertfordshire County Council's Local Transport Plan policies relating to sustainable development (Policies, 1. Transport User Hierarchy, 5. Development Management). Specifically, further explanation regarding bus services and access to bus services is required and further investigation into cycling infrastructure beyond Chiswell Green local shops.

Description of the Proposal

This application is for the development of St Stephens Green Farm (including the demolition of the existing buildings within the site) and the construction of 330 residential units. The proposed development site is located to the east of Chiswell Green adjacent to the northern side of Chiswell Green Lane.

A Transport Assessment (TA), which includes a Travel Plan has been submitted with this application.

Primary Vehicular Access

The site has two opportunities to connect to routes classified as public highway in Chiswell Green Lane and The Croft. The development proposal includes a main vehicle access to Chiswell Green and a secondary access restricted to emergency/cycling/walking to The

Croft. In addition, the development proposes to utilise upgraded rights of way adjacent to the site (although it is not clear what the extent of the way upgrade consists).

The primary access vehicular, pedestrian and cycle access to the proposed development would be achieved by the creation of a priority give-way junction located off the northern side of Chiswell Green Lane

As shown on Drawing No. 21-086 / 001 Rev B, the geometric design of the access would take the form of a simple junction with 6.0-metre kerb radii and a 5.5-metre-wide access road, sufficient to accommodate the simultaneous entry and exit movements of various sized vehicles.

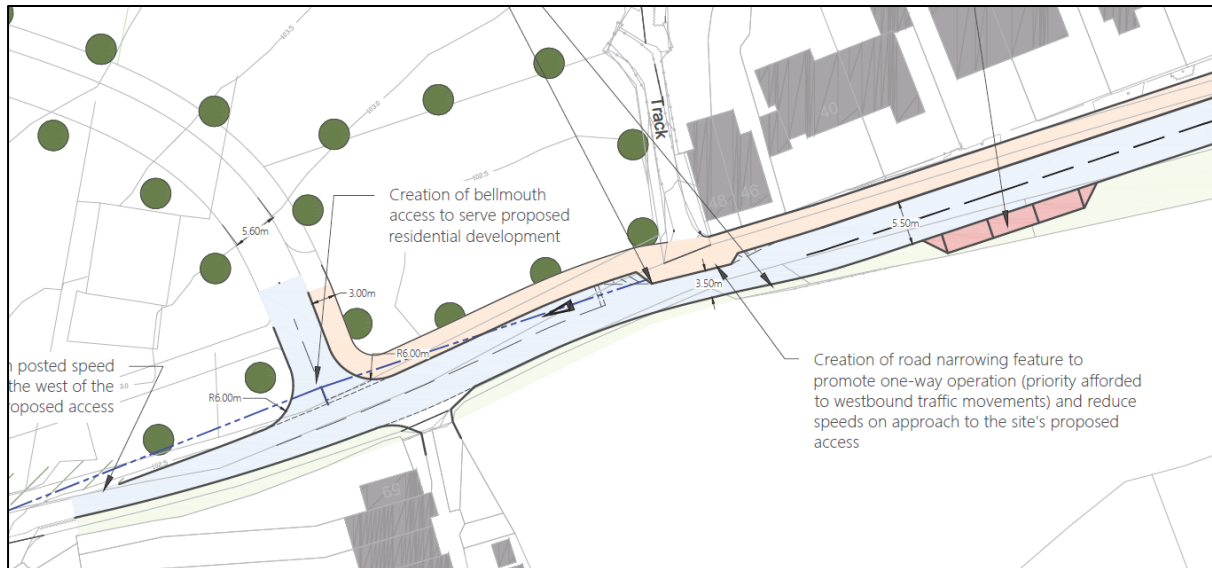


Fig 1 Extract from Drawing No. 21-086 / 001 Rev B (Proposed Access Arrangement)

As part of the proposed access design, a short section of the carriageway of Chiswell Green Lane to the east of the site's access would be narrowed to 3.5-metres in width, to promote one-way operation (priority afforded to westbound traffic movements). As stated by the applicant, this feature would influence motorised users to travel at low speeds (i.e. sub-30-mph) in both an east and westbound direction. To be clear, the narrowing also conveniently overcomes the lack of available lane in the area. I assume the narrowing would not be included if it's primary function to create more space for the cycling facility was not necessary. However, I agree it is a useful addition in this situation because with greater attention to detail/design it can/should also make a feature of the right of way (St Stephen 082) which must also be upgraded to form a main pedestrian access to the development. However, further detail is required to ensure footpath 082 is upgraded to reflect the most direct route for cyclists and pedestrians accessing the development.

The applicant suggests that the extent of the existing 30mph speed limit would also be extended to a point beyond the west of the site's proposed access to ensure car drivers are afforded sufficient inter-visibility with other motorised and non-motorised users. As stated in HCC's Strategy a speed limit in isolation will not necessarily influence all driver's behaviour. We agree a minor shift in location of the terminal signs will suit the proposed layout and is likely to align with HCC speed limit requirements. However, Automatic Traffic Counter (ATC) survey demonstrate that the speed limit change is a supported complimentary measure, not a requirement to make the access acceptable.

As discussed at the pre application stage, the section of Chiswell Green Lane to the west would remain unchanged/maintained as a quiet rural lane. This is intentional. The quiet,

narrow rural nature of the western section provides a natural deterrent which discourages 'rat running'. This view is supported by traffic surveys which indicate relatively minor use of the route which aligns with the general lack of clear destinations that would lead to rat running traffic. It is noted that there are a several properties within the first section of Chiswell Green Lane which are not currently fully operational, the additional traffic generated that may be generated by these land uses is not consider sufficient to lead to a severe impact on the route.

The design of the proposed access would require the full utilisation of land classified as public highway (see Fig 2), and result in the displacement of parked vehicles, likely to be in association with property in Chiswell Green Lane. To compensate for the loss of off-street parking, the design includes the provision of 3 parallel parking bays within a section of the public highway located off the southern side of the carriageway. The planning authority are alerted the requirement to remove two mature trees to provide these spaces in this location. Judging by the condition of the verge in this location the area appears to be used by more than three vehicles. We are concerned that three spaces will be an under provision leading to displaced parking becoming a nuisance. Either additional parking spaces or greater parking control will be necessary.



Fig 2 Extract from plan showing land classified as public highway

To inform the design and optimum position of the access, the 85th percentile speeds from the ATC survey in Chiswell Green Lane, was used to calculate the required visibility splays based on the stopping sight distance formula, as set out in the DfT's 'Manual for Streets 1' (MfS1) publication.

The applicant has shown that the design of the proposed access can achieve visibility splays in excess of the observed speeds and the stopping distance parameters set out in the DfT's MfS1 publication, it is considered that car drivers would be afforded sufficient inter-visibility with other road users, thereby enabling safe manoeuvres to be undertaken at the two-way priority junction with Chiswell Green Lane.

Shared Foot / Cycleway

The design of the proposed main access would also incorporate a shared foot / cycleway measuring 3.0 metres in width on the eastern side of the proposed access road (See Fig 1). This would connect to a new shared foot/cycleway running in an easterly direction along the full length of the northern side of Chiswell Green Lane and tie into existing infrastructure

either side of the double mini-roundabout junction of the B4630 Watford Road/Tippendell Lane (see Fig 3). The improvements at the double mini roundabout are shown 'in principle', further extensive work will need to be carried out to ensure attractive enhanced environment is delivered.

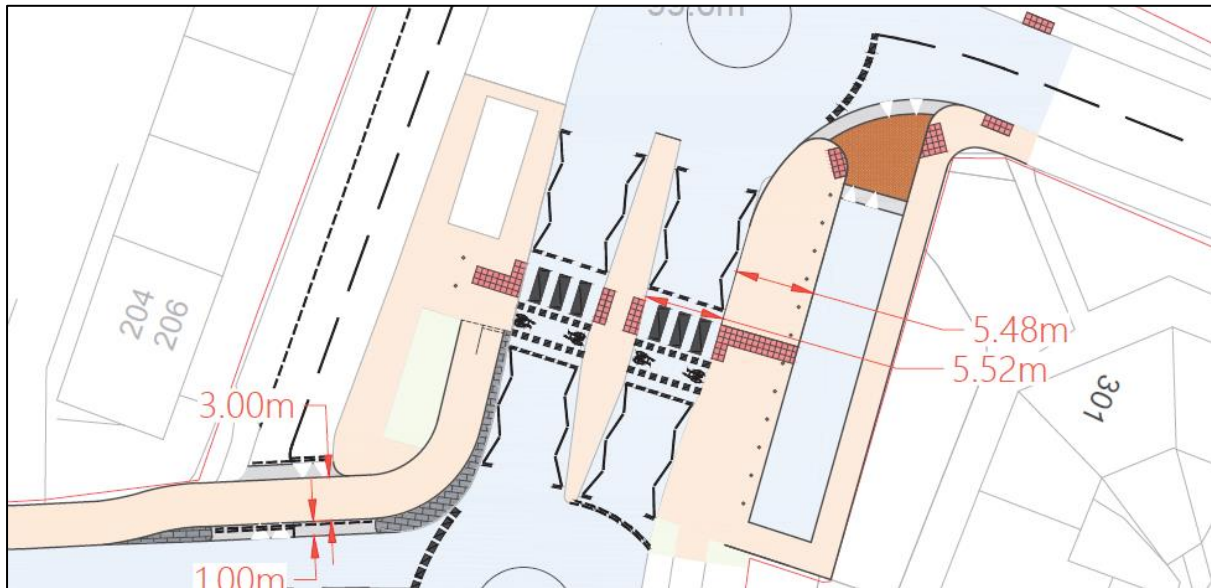


Fig 3 Extract from Drawing 21086 002 (Proposed Highway Amendments)

As shown on Drawing No. 21-086 / 002, the width of the carriageway way of Chiswell Green Lane would be reduced to 5.5-metres, to accommodate a raised table feature at the intersection with Stanley Avenue (Fig 4) and allow priority to be afforded to pedestrians and cyclists over motorised users. Further it would enable existing trees and a telegraph pole currently located in the highway verge to be retained. The provision of this feature would also arguably discourage future households from 'rat-running' via Stanley Avenue, in attempting to gain access to the B4630 Watford Road through bypassing the double mini-roundabout junctions.

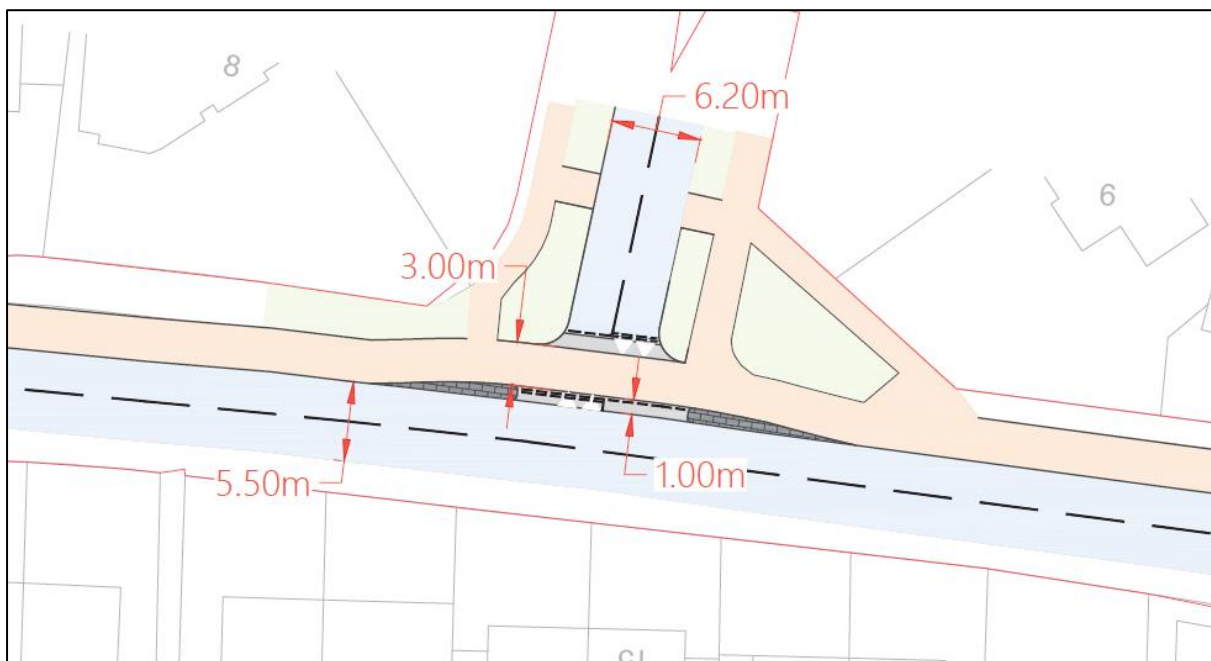


Fig 4 Extract taken from Drawing 21086 002 (Proposed Foot/Cycle Enhancements (Sheet 1 - Stanley Ave)

Watford Road junction with Chiswell Green Lane and Tippendell Lane

A similar raised table feature would be provided at the junction of Chiswell Green Lane and Watford Road (Minor), the latter providing direct access to the parade of shops located off the western side of the B4630 Watford Road. It is proposed that the shared foot/cycleway would extend around the northwestern corner of the mini-roundabout junction of the B4630 Watford Road/Chiswell Green Lane, prior to adjoining an upgraded Zebra Crossing positioned on a raised table.

The footway located along the eastern side of the Zebra Crossing would be upgraded to a shared foot/cycleway and widened to circa 5.5-metres in width. This would continue in a north-easterly direction to a shared space raised table at the junction of Tippendell Lane and access road serving the parade of shops situated off the eastern side of the B4630 Watford Road. Bollards would be installed at the back edge of the shared foot/cycleway to prevent encroachment from motorised users accessing the local shops.

The footway along the eastern side of the access road serving the local shops would comprise of dropped kerbs to enable vehicles to enter and exit the area of hardstanding that is used for parking, adjacent to the main entrances.

It is agreed that the provision of this new infrastructure would enhancement the area and provide a convenient, safe walking and cycling route to public transport infrastructure/services as well as a range of amenities available in Chiswell Green village centre and a good starting point to longer journeys.

The concern is that the applicant has not taken the process further, at the pre application stage we asked the question, what are the typical/routine destinations residents need to reach and why? How can the proportion of car journeys used to make those journeys be replaced by walking, cycling and public transport? The applicant has made a connection to the neighborhood centre, we would require consideration of other destinations slightly further afield and fully understand and where necessary overcome the barriers deterring active or public transport as a first choice.

Secondary Access

A secondary emergency vehicle access measuring circa 5 metres in width would be located off the western side of The Croft. The applicant states that pedestrians and cyclists would be prohibited from using the emergency vehicle access. It is not made clear why this access includes this restriction and it is difficult to understand how in practice this will work. The LHA would encourage all developments of this nature to maximise permeability to help fully integrate development to the adjacent network.

It is assumed the route will be constructed using tarmacadam or similar. However, the appearance/junction/boundary treatment are not made clear.

Internal Layout

It is noted that the application is for outline planning permission. Although an indicative layout is included in our experience subsequent revisions are likely to lead to different layout and unit mix. As the applicant states, it's reasonable to assume the internal layout will be subject to further master planning and no doubt the final layout can reflect the principles of MfS1 and Policy 1 of HCC's LTP4. Ultimately good design will create a layout with safe routes for vehicular traffic, but which ultimately promotes the interests of residents as pedestrians and cyclists, providing optimal access to local amenities and sustainable

transport connections. Naturally, the aim is to encourage the use of walking and cycling within the proposed development and to surrounding amenities. Ideally, this will be achieved by combining the provision of new and improved infrastructure and with the implementation of a Residential Travel Plan.

Parking

In general terms, the LHA does not apply detailed parking policy at a parking ratio level. In line with the theme of HCC's Local Transport Plan we acknowledge the relationship between parking provision and car ownership and would therefore support low parking ratios if underpinned with sustainable location and genuine opportunity of sustainable transport choices.

Clearly, cycle parking ratios should exceed ratios. In addition, storage facilities for cycles must be a key consideration of subsequent detailed revisions.

Trip Generation

The applicant has used TRICS database to establish the predicted person/multi-modal trip generation. The results show that the development proposals would have the potential to generate in the order of 2,584 two-way person trips over the course of a typical weekday including 296 and 242 during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

The assessment goes on to establish that approximately three quarters (75%) of all households living within the area surrounding the site are dependent on travelling by private car for their journey to/from various workplace destinations, 13% regularly travel by public transport. Approximately 6% travel by the 'active' modes (walking and cycling).

Normally, an assessment of the impact of development on the local road network is carried out against the morning/evening peak hours. In this case, the development proposals is predicted to generate in the region of 296 and 242 two-way person trip movements during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods respectively. Of these, approximately 223 and 182 would comprise private car trips, 38 and 31 by public transport and 17 and 14 by the 'active' modes of walking and cycling.

Trip Distribution

The predicted distribution of vehicular traffic movements likely to be generated by the development proposals has been based on origin-destination dataset 'Location of Usual Residence and Place of Work from the 2011 Census.

Firstly, it is evident that the majority (96.8%) of vehicular traffic generated by the development would travel in an easterly direction along Chiswell Green Lane towards the double mini-roundabout junctions with the B4630 Watford Road/Tippendell Lane. This would equate to a total of 218 and 178 two-way vehicular movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively. Only a small proportion (3.2%) of vehicular traffic, equating to 4 two-way movements would travel to/from the proposed development via the western/rural section of Chiswell Green Lane.

Beyond the mini-roundabout junction of the B4630 Watford Road/Chiswell Green Lane, approximately 66% of vehicular traffic would head in a northerly direction. On reaching the mini-roundabout junction of B4630 Watford Road/Tippendell Lane, approximately 43% of vehicular traffic would turn right and head in a south-easterly direction along Tippendell Lane

and the A405 North Orbital Road. A total of 23% of vehicular traffic would head in a northerly direction along the B4630 Watford Road.

Approximately 32% of vehicular traffic (equivalent to 71 and 58 two-way movements) would head in a north/southbound direction along the B4630 Watford Road to/from The Noke Roundabout junction.

Highway Capacity Impact

Assessing the impact of the development on the capacity of the network is routinely set against five years post application (2026), taking into account background traffic growth and any significant committed development. It is acknowledged that the local road network in the vicinity of the development the double mini roundabout junction is a busy junction and during peak times can suffer from a level of congestion. The results from the baseline model scenario demonstrates the area being close to normal operating capacity.

The development proposals are anticipated to generate in the order of 71 and 58 two-way vehicular movements along the B4630 Watford Road during the weekday AM (08:00 – 09:00) and PM (17:00 – 8:00) peak hour periods, respectively. In comparison with the observed baseline traffic flows, this equates to circa 5%. It was agreed with the applicant it is not considered necessary to assess the impact of the development proposals on the 4-arm Noke roundabout junction. It is noted that congestion at this junction is largely associated with tailbacks caused by M25(J21a).

Regarding Watford Road/Chiswell Green Lane/Tippendell Lane double mini-roundabout junction within the future 2026 scenario, there is a predicted a material worsening on the operational performance of all arms of the junction during the weekday AM (07:45 – 08:45) and PM (17:15 – 18:15) peak hour periods, respectively.

It was acknowledged during the pre-application discussions with the applicant, due to the lack of highway boundary available on either side of the double mini-roundabout junctions, there is little or no scope to enhance the performance of the double mini-roundabout junctions through increasing the entry width and effective flare length of several of the approach arms.

Notwithstanding this, the applicant points out that development proposals would deliver substantial enhancements to the walking and cycling environment in Chiswell Green village centre. The theory being that the provision of pedestrian and cycle infrastructural measures would provide a more balanced travel demand for future households and visitors to the proposed development, in accordance with the main aspirations of national, regional, and local planning policy, most notably the NPPF and Policy 1 of the HCC's LTP4). We would agree with this approach and in many cases, creating additional highway capacity is not necessarily the long-term solution in supporting growth in sustainable transport.

With regard to person trip movements undertaken on-foot, It is noted that the applicant commits to enhanced pedestrian and cyclist routes through the provision of a shared foot/cycleway along the full length of the northern side of Chiswell Green Lane, which would provide convenient, direct, and safe access on-foot and by cycle to local public transport infrastructure/services and range of amenities situated in Chiswell Green village centre.

The applicant claims the development is within walking distance of bus stops located either side of the B4630 Watford Road and Tippendell Lane which are served by frequent bus services to a host of local and regional destinations. However, in support of the overarching need to increase bus patronage to reduce car use, access to bus routes is a key consideration. HCC's highway design guide states that '...bus stops should be located so

that the maximum walking distance from any dwelling is 400m'. Although at this stage the internal layout is only indicative clearly the distance between bus stops in Watford Road is greater than 400m. The applicant reiterates predicted patronage to be in the region of 37 and 30 two way movements by public transport during the AM (08:00 – 09:0) and PM (17:00 – 18:00) peak hour periods, it is considered that this demand can be easily accommodated on existing bus routes (based on the existing resident's modal split). We would not disagree with this assessment, but we should not lose sight on the fact that we are seeking to improve the existing situation by increasing the proportion of residents using bus services. The applicant's Travel Plan predicts the new residents will increase their bus use by 4% over the first five years. By retaining the current level of bus service and expecting a new community (which are potentially a greater distance from the services compared with existing residents) suggests we are going to fail to achieve this objective. Further investigation into how access to bus services, and bus services will be improved in support of this proposal.

Mitigation Summary

Clearly the applicant has considered the hierarchical approach of LTP4 Policy 1 as a key feature of the proposal ensuring that priority is given to more sustainable forms of transport and opportunities to reduce demand to use private cars.

The applicant claims to have '...set out a package of measures in the form of a Movement & Access Strategy that is a series of tailored transport solutions to ensure that places of residence, work and leisure within the site are fully accessible but also ensures efficient, reliable, and legible travel connections to existing settlements and transport hubs, encouraging sustainable travel choices and removing physical and psychological barriers to movement.' Unfortunately, we have not arrived at the same conclusion.

The submission goes on to state that '...the Movement & Access Strategy delivers a package of mitigation that combines hard interventions (infrastructure such as improved footways, cycleways and crossing facilities) and soft interventions (travel planning, promotions, and marketing) to achieve meaningful changes in travel behaviour and an ambitious shift in modal share targets.', a position we would also like to reach but at this stage it is a statement that we cannot agree with.

Throughout pre-application discussions we acknowledged the difficulty in increasing capacity at the Watford Road double mini roundabout junction, and, in any case, in line with our policies we suggested the applicant should concentrate on reducing the reliance on private car. As a result, off-site works are proposed to enhance the pedestrian and cycling environment around the double mini-roundabout junction.

As acknowledged by Table 3.2 (Transport Assessment) the applicant highlights the relationship between Chiswell Green and the St Albans City. The applicant lists secondary education, leisure and retail all beyond normal walking distances but well within cycling and bus (journey to work census suggests in the region of 20% of new residents will travel in this direction).

It is noted that the applicant has considered a link to local facilities, but it will be necessary to investigate routes beyond junction with Watford Road. National planning policy states that we should ensure that, '...appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and it's location' (NPPF, 110 a)). Accepting the clear links with St Albans City we would expect an investigation into the links between city and the site, what barriers exist, in particularly to cycling, and how can they be overcome?

Planning Obligations

As you are aware HCC have recently published our 'Guide to Developer Infrastructure Contributions', the Transport section includes the consideration of our two strand approach to securing appropriate supporting infrastructure. At this stage this policy has not been considered by the applicant and is integral to the discussion relating to sustainability.

Conclusion

At this stage the local highway authority recommends the planning application is refused for the following reason:

The proposal fails to comply with Hertfordshire County Council's Local Transport Plan policies relating to sustainable development (Policies, 1. Transport User Hierarchy, 5. Development Management), specifically, further explanation regarding bus services and access to bus services is required and further investigation into cycling infrastructure beyond Chiswell Green local shops.

Signed

James Dale
February 2022

Appendix 2

Constraints Plan

Slight gradient on approach to city centre.

Cyclists required to dismount over bridge and slight gradient.

Narrow footways circa 1.5-metres wide. Cycling is prohibited along ProW (St Albans City 034).

Cycle barrier present at south-eastern end of Meautys cul-de-sac.

Loose and uneven surface.

Narrow width (2.0-metres) of footbridge.

Narrow, unlit carriageway and potential conflict with motorised users.

Loose gravelly surface with cycle route passing through car park for Wadley Hut (Scouts Hut).

Route forms part of ProW (St Albans City 097) and measures circa 2.0-metres in width. Western-end is comprised of loose gravel.



Steep incline and several signalised junctions on approach to city centre. No dedicated cycling infrastructure (i.e. on-carriageway cycle lanes and advanced cycle stop lines etc).

Steep incline and no dedicated cycling infrastructure.

Significant volume of traffic observed during the PM peak period. Slow moving and queuing traffic on approach arms of double mini-roundabout junctions.

Narrow (circa 2.0-metre wide) shared foot / cycleway. Minor conflict between pedestrians and cyclists along mostly traffic-free route.

Pedestrian and cyclists required to traverse a wide carriageway, when travelling in an east to west direction.

Loose gravelly and uneven surface at western end of Abbots Avenue West.

Steep incline and may deter novice cyclists.

No dedicated on and off-carriageway cycle lane provision along north-western section of Tippendell Lane.

Opportunities Plan

Traffic-free route that is well-surfaced through Verulamium Park.

Toucan crossing facility present and section of shared foot / cycleway along south-western side of King Harry Lane.

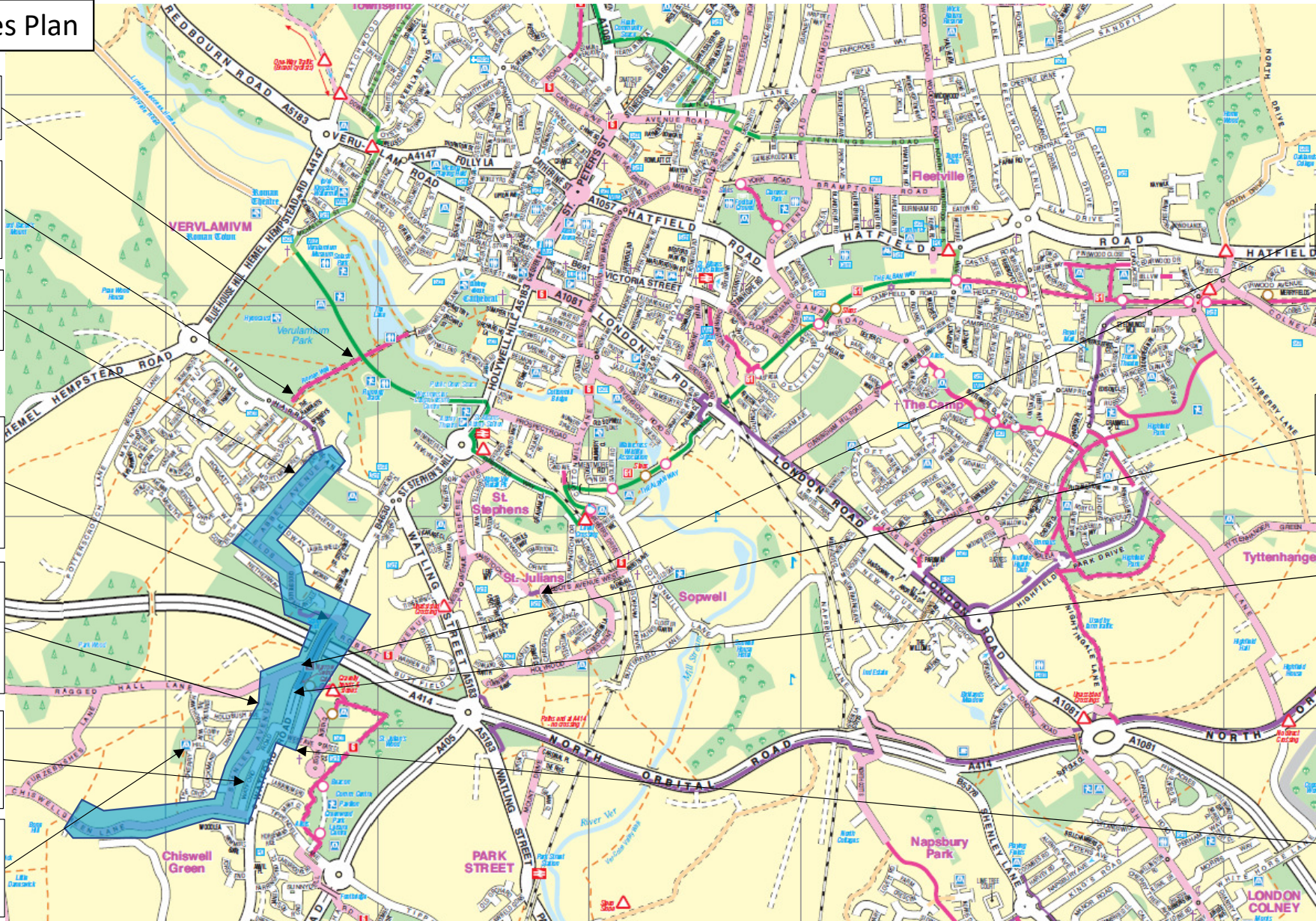
Scope to enhance 'route suggested by cyclists' through installation of signage.

Enhance cycle route through ensuring there is a consistent width of 3.0-metres and install lighting and dropped kerbs at western end where it adjoins to Netherway.

Encourage cyclists to utilise quieter roads (i.e. Stanley Avenue and Ragged Hall Lane) to gain access to dedicated cycle lane provision along the B4630 Watford Road.

Encourage cyclists to utilise Watford Road Minor (service road running parallel to B4630 Watford Road).

Upgrade surface material of a section of PRow (St Stephen 080) from Cherry Hill to north-eastern corner of site.



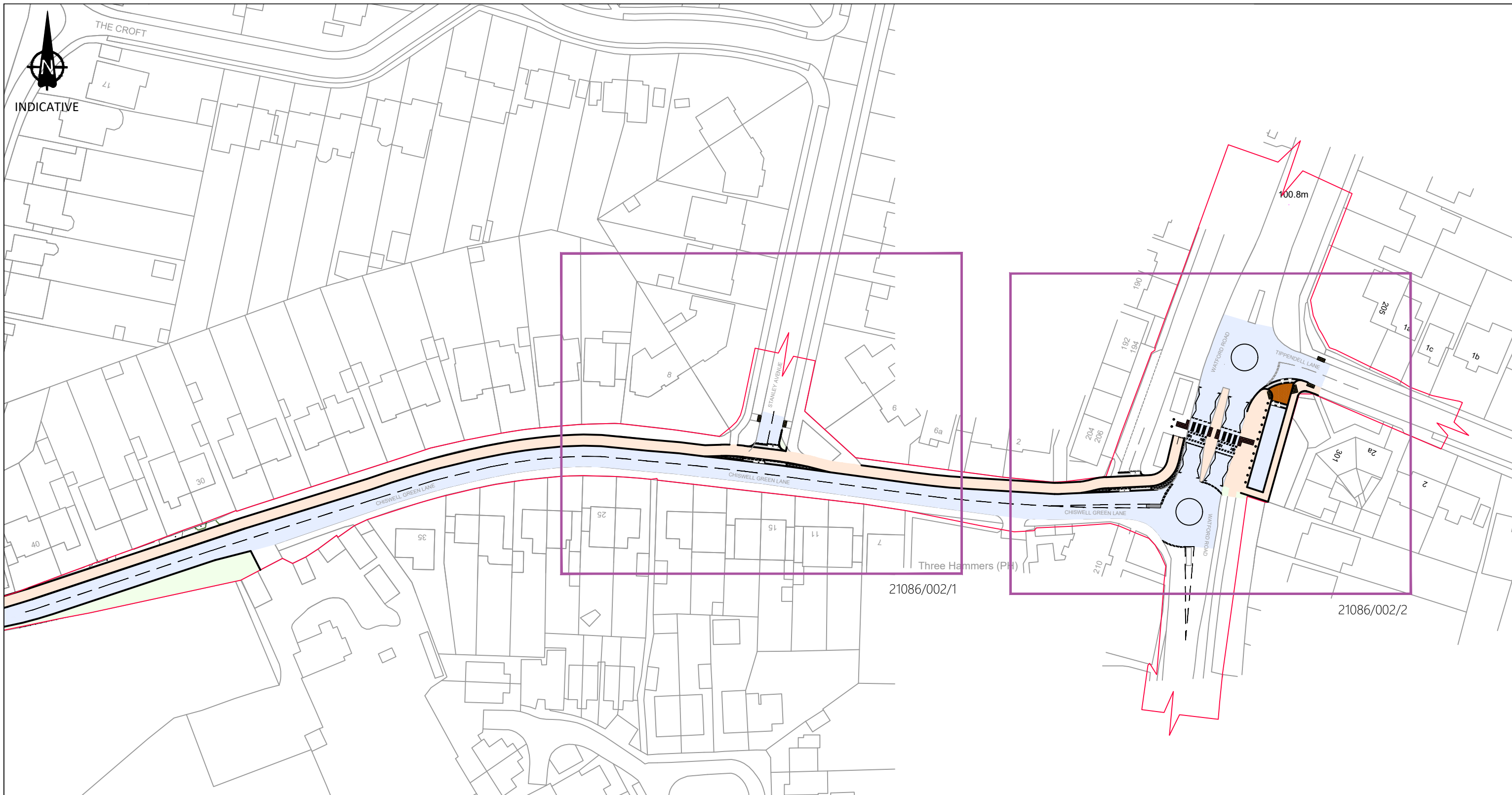
Upgrade surface of carriageway.

Enhance connectivity between Ragged Hall Lane and the B4630 Watford Road.

Extend on-carriageway cycle lanes along the B4630 Watford Road, as well as divert north and southbound cyclists along Watford Road Minor.





Upgrade Puffin to Toucan crossing facility to provide a safe and direct cycle route to Killigrew Infant and Primary School.

Drawings



Notes

- Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.
- This drawing has been based upon OS Mapping. Milestone Transport Planning cannot be held responsible for any discrepancies which may arise because of it.

	Proposed Shared Foot/Cycle Path
	Proposed Realigned Carriageway
	Highway Verge
	Highway Boundary Extent

Drawing Revisions				Chk:
Rev.	Dwn:	Date:	Details	TW
-	EH	10/05/2022	First issue	

Client

Headlands Way Limited

Project

Land North of Chiswell Green Lane, Chiswell Green, St Albans

Title

Proposed Foot/Cycle Amendments - Chiswell Green Lane, Stanley Avenue, Watford Road

MILESTONE
TRANSPORT PLANNING

Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN
Tel: 0191 338 7220

Drawing Number:

21086/002

Scale:

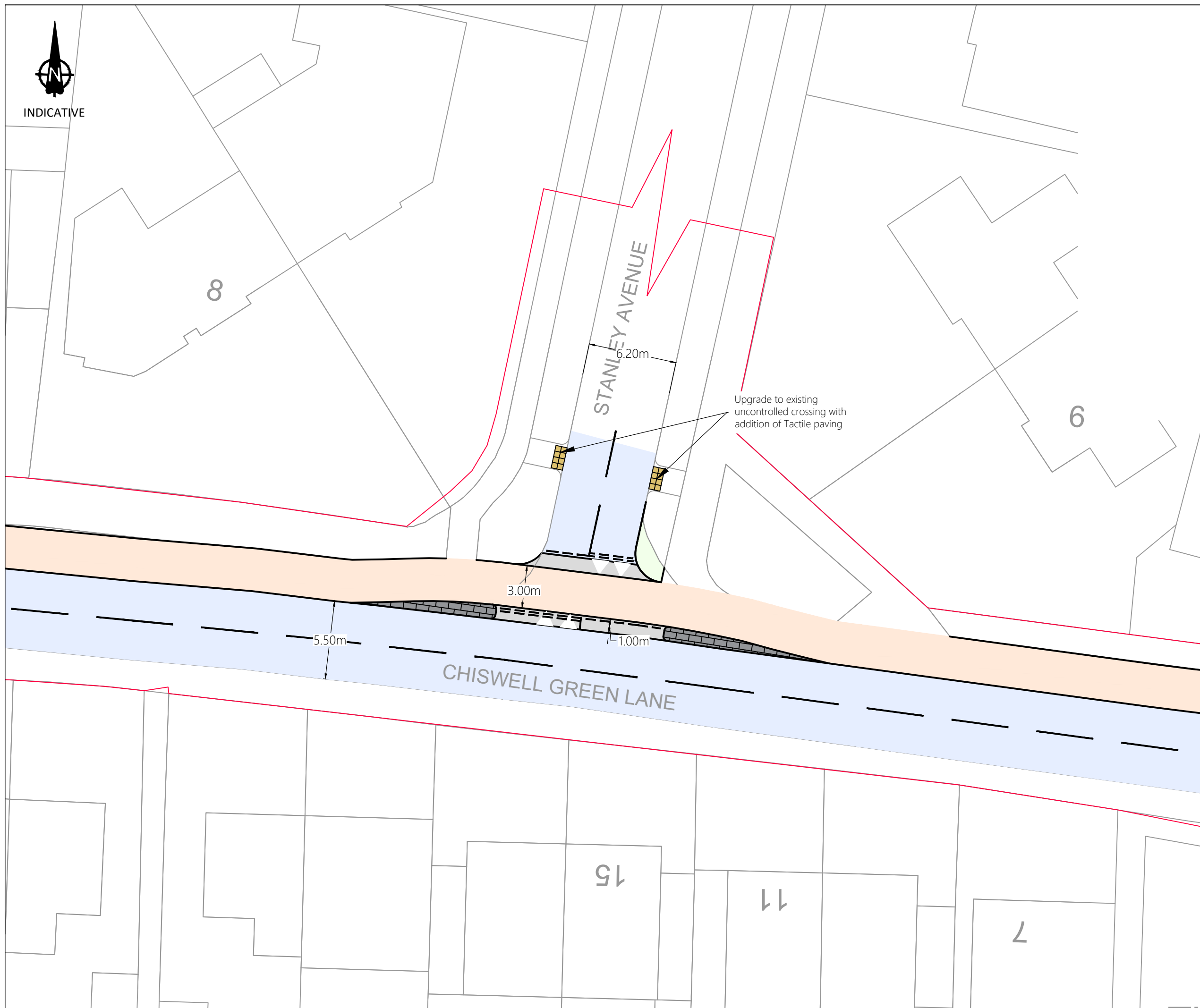
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Revision:

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INDICATIVE



Notes
Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.

- Proposed Shared Foot/Cycle Path
- Proposed Realigned Carriageway
- Highway Verge
- Highway Boundary Extent

Ordnance Survey Licence number: 100057360

Drawing Revisions

Rev.	Drn:	Date:	Details	Chk:
-	EH	10/05/2022	First issue	TW

Client

Headlands Way Limited

Project

Land North of Chiswell Green Lane, Chiswell Green, Hertfordshire, AL2 3AJ

Title

Proposed Foot/Cycle Enhancements (Stanley Avenue)

MILESTONE
TRANSPORT PLANNING

Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN
Tel: 0191 338 7220
web: www.milestonetp.co.uk

Drawing Number:

21086/002/1

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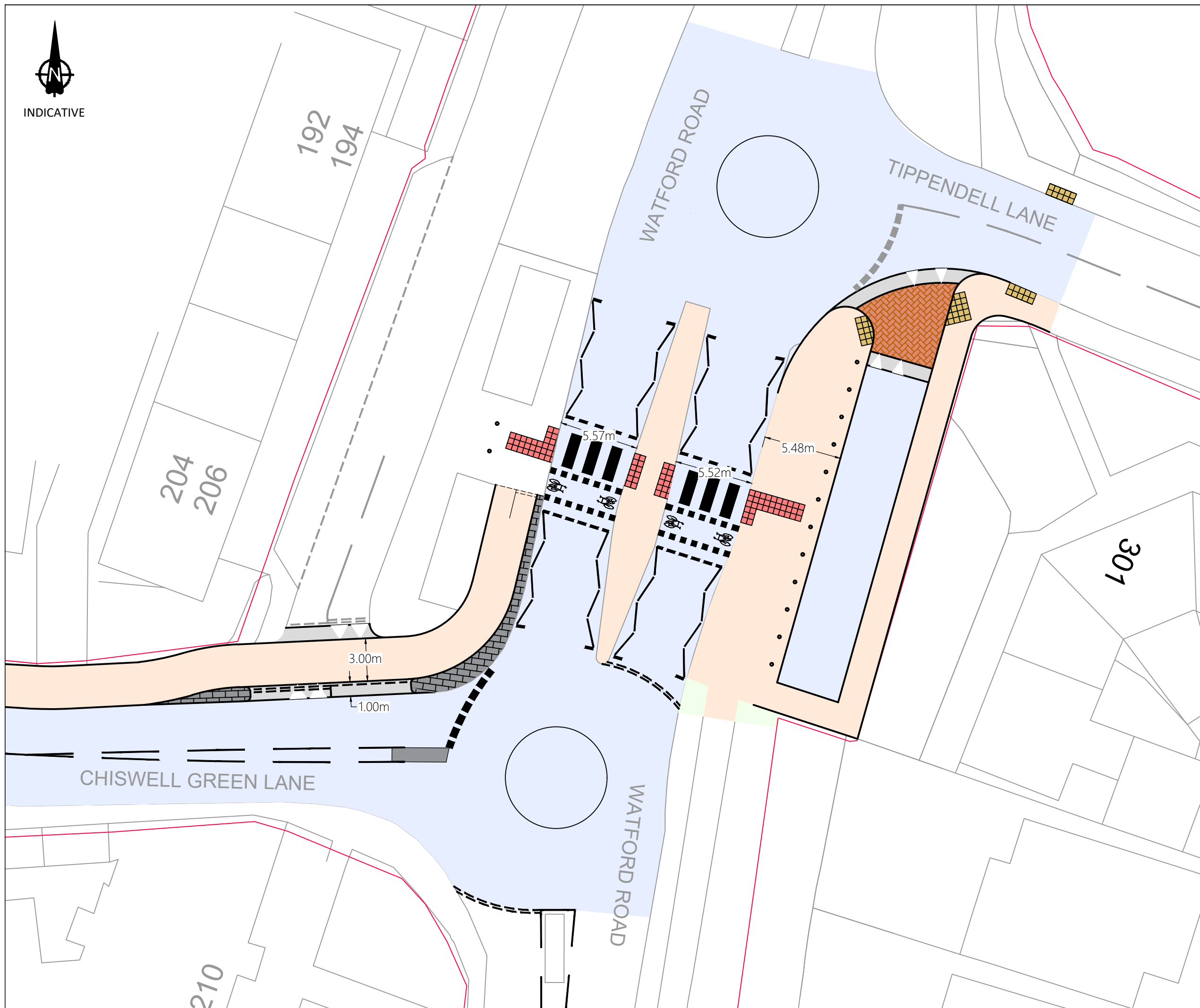
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Revision:

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INDICATIVE



Notes
Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.

- Proposed Shared Foot/Cycle Path
- Proposed Realigned Carriageway
- Proposed Highway Verge
- Highway Boundary Extent
- Shared Space Raised Table
- Tactile Paving

Ordnance Survey Licence number: 100057360

Drawing Revisions

Rev:	Drn:	Date:	Details:	Chk:
-	EH	10/05/2022	First issue	TW

Client
Headlands Way Limited

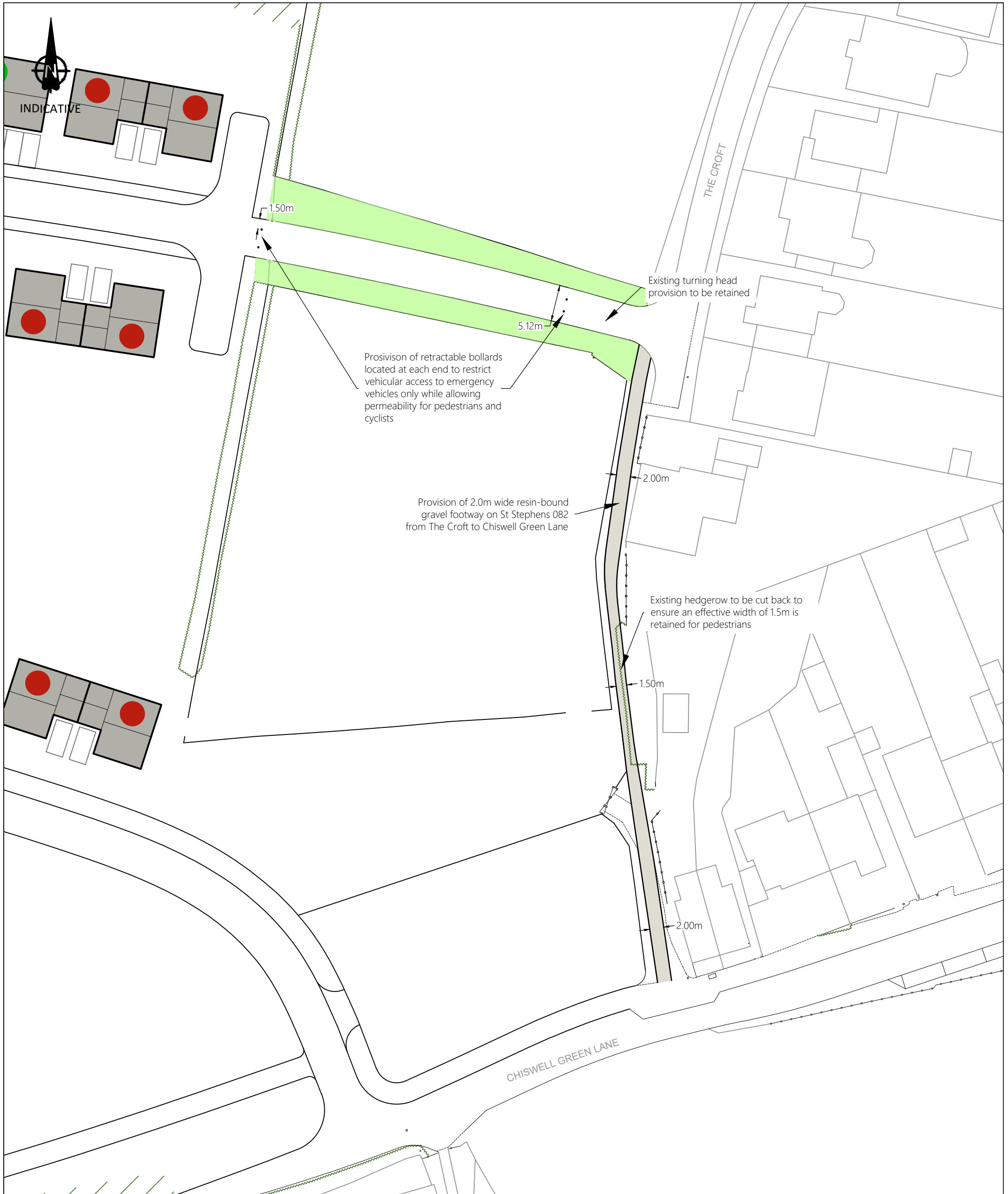
Project
Land North of Chiswell Green Lane, Chiswell Green, Hertfordshire, AL2 3AJ

Title
Proposed Foot/Cycle Amendments - Watford Road

MILESTONE
TRANSPORT PLANNING



Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
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web: www.milestonetp.co.uk

Drawing Number:	Scale:
21086/002/2	1:250 @ A3
Revision:	-



Notes

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	Resin-Bound Gravel Footway
	Soft Landscaping

Drawing Revisions				Chk:
Rev:	Drn:	Date:	Details	TW
-	EH	31/03/2022	First issue	

Client
Headlands Way Limited

Project
Land North of Chiswell Green Lane, Chiswell Green

Title
Proposed PRoW Improvements (St Stephens 082)

MILESTONE
TRANSPORT PLANNING

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Drawing Number:
21086/003

Scale:
1:500 @ A3

Revision:
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Ordnance Survey Licence number: 100057360

Drawing Revisions				Title	
Rev:	Drm:	Date:	Details	Chk:	Proposed PRoW Upgrades (St Stephens FP080)
-	EH	31/03/2022	First issue	TW	
Client				 Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA Tel: 01483 397888 Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN Tel: 0191 338 7220	
Project				Drawing Number:	
Land North of Chiswell Green Lane, Chiswell Green				21086/004	
				Scale: 1:500 @ A3	
				Revision: -	



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Notes

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- Spaces allocated to residents of Chiswell Green Lane
- Spaces for visitors to Memorial Park

Ordnance Survey Licence number: 100057360

Drawing Revisions

Rev.	Drn:	Date:	Details	Chk:
-	EH	21/04/2022	First issue	TW

Client

Headlands Way Limited

Project

Land North of Chiswell Green Lane, Chiswell Green

Title

Proposed Memorial Car Parking Allocation



Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
 Tel: 01483 397888
 Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN
 Tel: 0191 338 7220
 web: www.milestonetp.co.uk

Drawing Number:

21086/005

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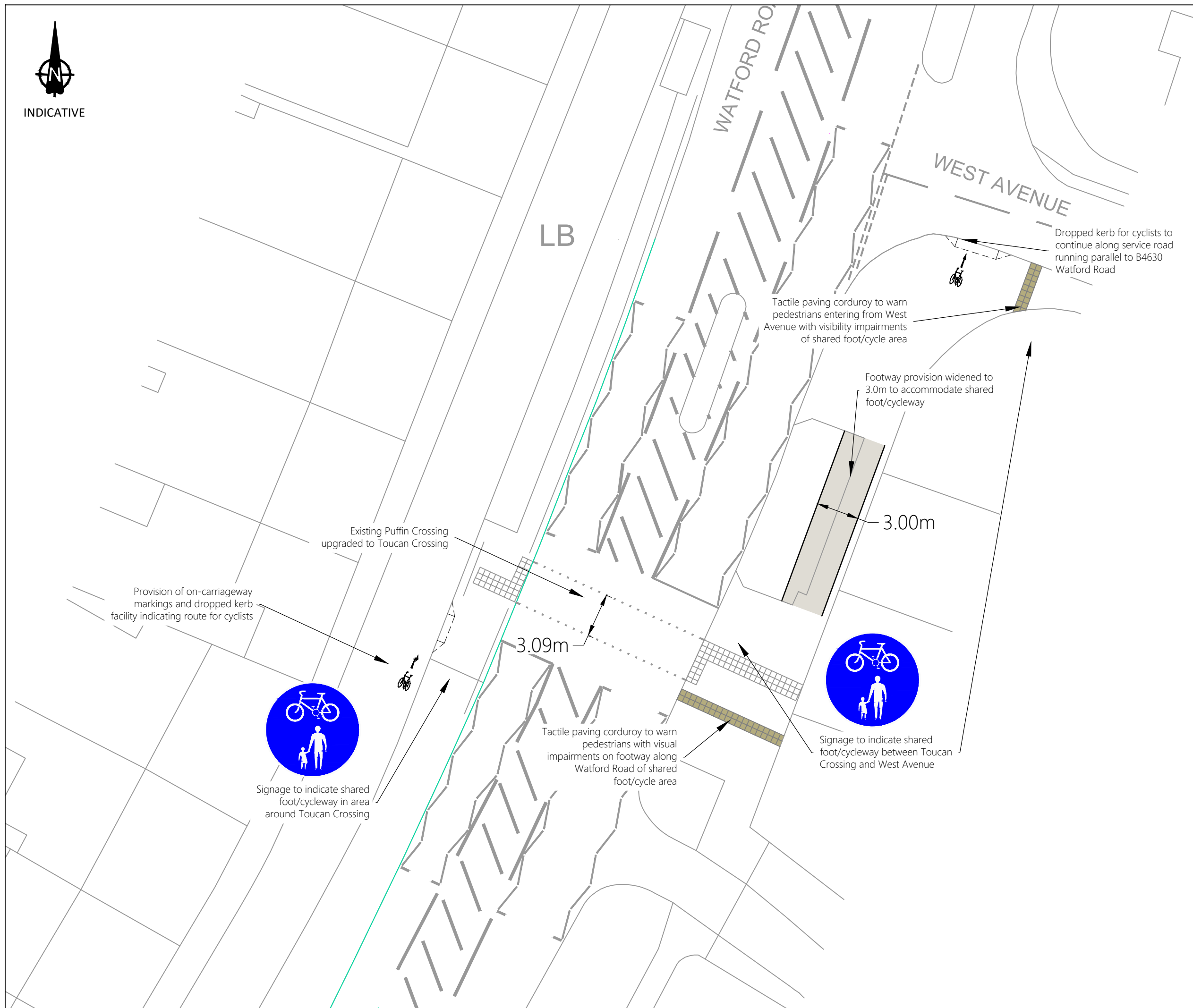
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Revision:

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INDICATIVE



- Notes
1. Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.
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Ordnance Survey Licence number: 100057360

Drawing Revisions

Rev.	Drn:	Date:	Details	Chk:
-	EH	22/04/2022	First issue	TW

Client
Headlands Way Limited

Project
Land North of Chiswell Green Lane, Chiswell Green

Title
Proposed Pedestrian/Cycling Upgrades - Toucan Crossing

MILESTONE
TRANSPORT PLANNING

Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN
Tel: 0191 338 7220
web: www.milestonetp.co.uk

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Revision:	-